DOCUMENT RESUME

ED 096 998 IR 001 179

AUTHOR	Carroll, John M.
TITLE	The Computer "Discredit Bureau": An Extension of a Community Information Utility.
INSTITUTION	University of Western Ontario, London. Dept. of Computer Science.
PUB DATE	Oct 74
NOTE	6p.; Paper presented at the Annual Meeting of the American Society for Information Science (37th, Atlanta, Georgia, October 1974)
EDRS PRICE	MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS	Community Service Programs; *Community Services; *Computer Oriented Programs; Computers; Consumer Education; *Consumer Science; Credit (Finance); Data Bases; Information Centers; *Information Processing; Information Retrieval; Utilities
IDENTIFIERS	*Canada

ABSTRACT

The "Discredit" Bureau borrows some of the computerized information-processing techniques adopted by credit-reporting agencies and uses them in the interest of consumers to help them press complaints against suppliers and prospective employers. This is an additional service currently being incorporated into those already afforded by a computer-based voluntary information utility dedicated to community service. It is one phase of a continuing study "in vivo" of the potential role of computing and communications technology in community-wide information interchange. (Author)

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THE COMPUTER "DISCREDIT BUREAU" - AN EXTENSION OF A COMMUNITY INFORMATION UTILITY*

John M. Carroll
Computer Science Dept., University of Western Ontario
London, Canada

Abstract

The "Discredit" Bureau borrows some of the computerized information-processing techniques adopted by credit-reporting agencies and uses them in the interest of consumers to help them press complaints against suppliers and prospective employers. This is an additional service currently being incorporated into those already afforded by a computer-based voluntary information utility dedicated to community service. It is one phase of a continuing study in vivo of the potential role of computing and communications technology in community-wide information interchange.

INTRODUCTION

The social unrest that characterized the late 1960's helped convince many people that effective channels for community information would be beneficial as a system to provide timely warning of incipient social unrest, to identify major areas of contention, to communicate proposals for remedial action, and to gauge the effect of such proposals.

Additional social benefits were foreseen from such systems: alleviating urban transportation problems by facilitating plans to provide work at home or within the neighbourhood (6); contributing to upward social mobility or self-realization through open-education programmes; and increasing citizen participation in the political process (16).

It was visualized that modern technology as represented by community-wide wired television networks; developments in telephony such as the Picture-phone (13) and touch-tone dialing; and in particular, the remotely-accessed resource-shared computer would all play important roles in the synthesis of a community information utility (5, 13, 14).

The early planners didn't specify whether these utilities would operate in the public, private, or voluntary sector of the economy. In the United States, experimental information utilities were established in Philadelphia and Los Angeles. The former derived its impetus from the Model Cities Programme, which is no longer being supported. The latter is trying to become a self-supporting operation (12).

It is uncertain exactly how many community information utilities are operating today in North America, what their affiliations are, and whether or not they use a computer in their operations.

The Alliance of Information and Referral Services (10) lists 73 services 13 of which are said to use a computer. We have reason to believe this count is incomplete.

A study by the Government of Ontario alone dealt with 11 services (8).

We are in correspondance with one other Canadian system (9) which uses a computer. Professor L.I. Press of the University of Southern California has sent us information on one computer-based system in San Francisco (Resource One) and told us about another, which he is starting in Venice, California. The Alliance survey lists one service for all Canada and says it plans to use a computer; and only one computer-based system for California.

Our uncertainty is compounded by our knowledge that the financing of most community information centres is extremely shakey and that they have been known to cease operations without announcing their demise.

In Canada, the information utility concept has attracted favourable government consideration (18). This is partially attributed to geographical configuration of the country. This vast land, second only to the Soviet Union in land area, consists, for socio-economic purposes of a strip 120 miles wide and 4,000 miles long, mostly bordering on the United States. Few Canadian population centres are out of reach of U.S. television. For this reason, wired tv systems are much more popular in Canada than in the U.S. The wired tv systems exist principally to capture and distribute U.S. signals (19). This provides a ready-made infrastructure for community information utilities (11).

As for the Canadian government, the community information utility is looked upon not so much as a social palliative but as a means for unifying the country in a cultural sense (1).

*This project is supported in part by the Canadian Department of Communications whose support is gratefully acknowledged.

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Government interest has led to at least two studies aimed in part at defining the possible roles a community information utility could play (15). For example, 33 percent of respondants to one survey said they strongly wanted crisis advice available to them from this source (17).

The thrust of our work has been to use one aspect of modern information technology, the remotely-accessed time-shared computer, in an effort to amplify by its powers of information storage, manipulation and retrieval, the effectiveness of one existing community information service.

BACKGROUND

Since 1971, a major research thrust of this department has been studying the applicability, feasibility and configuration of information utilities dedicated to community service and using distributed time-shared computing resources.

In September 1972, we became associated with Information London, a voluntary agency providing a community information service principally by telephone.

Our participation led successively from computer analysis of calls for service; to capture of contact information in machine-sensible form, compilation and analysis of historical experiences; and creation of a computer-based community data bank; to on-line, real-time question answering by use of this data bank (3,4).

An analysis of cummulative client contacts from June 1973 until February 1974 (11,000 calls) showed consumer complaints to be the largest single area of concern (14% of all calls) (2).

This was the starting point of the present study.

DEFINITIONS

The following terms will be used in this discussion following a convention introduced by Hannigan (7):
Consumer - a natural person acting in his private capacity who purchases or seeks to purchase goods or services, or seeks employment or some social benefit for his own use or use by his dependents.
Complaint - the articulation of some grievance perceived by a consumer against a supplier of goods, services, or benefits or a prospective employer.
Complainant - a consumer who has articulated a perceived grievance against a supplier or prospective employer.
Complaint source - the supplier against whom the consumer perceives a grievance.
Complaint channel - agency with whom the consumer articulates his grievance or who receives a complaint from another complaint channel.
Voluntary sector - the aggregation of agencies which are made up of private individuals associated to achieve some perceived social good normally without official standing, and usually without expectation of profit.
Public sector - the aggregation of agencies created or acquired by official bodies responsible to some defined portion of the general electorate.
Transaction - a communication between complaint channel and complaint source, between complaint channels, or between consumer and complaint source.

OBJECTIVES

This paper describes the development of a computer-based system to assist seven voluntary agencies in a medium-sized Canadian city with the handling of consumer complaints.

The objectives of the system are as follows:

1. To consolidate consumer complaints so that the relative magnitude of specific problems can be determined free from errors arising either from failure to include all complaint channels, or multiple counting of the same complaint lodged with several complaint channels.

2. To obtain timely indications of fraudulent practices by use of cross tabulations to reveal patterns of activity based upon geogrpahical area, method of operation, and individuals or companies involved.

3. To furnish to each voluntary complaint channel the composite experience of other channels with respect to particular complaint sources currently under investigation.

4. To provide for the regular flow of composite consumer complaint information from complaint channels operating in the voluntary sector to appropriate regulatory agencies in the public sector.

5. To establish a repository of case histories and the information processing capability to tabulate and analyze this experience to facilitate the preparation of scholarly studies, briefs to lawmaking bodies, and materials for use in consumer education.

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METHODOLOGY

Our attack on the problem was two pronged and these proceeded in parallel:

1. Establish viable channels of communication.

2. Develop an adequate software capability.

Fortunately, hardware posed no problem as we have use of the university's PDP-10/50 computer, which is a time-sharing machine configured to allow simultaneous operation from a large number of terminals, both high-speed and keyboarded. Furthermore, a large assortment of terminal equipment was likewise available to us.

COMMUNICATIONS

A meeting was held at Information London, attended by representatives of the various complaint channels in the public and voluntary sectors.

Each representative in turn delivered a frank, concise and informative description of his agency's areas of concern, method of operation, personnel, and locations. He then fielded questions from other representatives which were highly professional and penetrating.

The transcript of this meeting afforded an advantageous starting point.

We then visited several of the voluntary agencies. We obtained copies of the data collection forms used and went over each item to determine what data was being collected and its utility.

Then we drew a sample of some 200 cases randomly from the files of each agency visited and took notes on each case.

These data enabled us to devise a proposed Uniform Consumer Complaint Form, rationalized for machine input.

The form was then submitted for comment to all complaint channels with a request for suggestions and modifications.

When consensus is reached on format, our department will have the data collection document printed as a two-part form. We will keep the complaint channels supplied with these forms and they, in turn, will send us the carbon copy of each transaction for entry by keypunch into our computer-based file.

Obviously, we will want to capture these data in machine-sensible form as soon as possible, but the initial thrust has to be to open channels of communication without introducing technological complications.

We have obligated ourselves to furnish to all complaint channels on a monthly basis, the following:

1. A statistical tabulation of the local consumer complaint "scene".

2. A ledger page compiling the composite experience with each complaint source.

For example, instead of the fraud squad hearing that a group of itinerent baby photographers calling themselves "Studio X" took Mrs. Jones for $12 and Mrs. Smith for $40, we will now be able to document the fact that 34 persons were cheated out of over $680; and furnish documentation that collates a maze of fragmentary clues into a coherent composite picture of the ring.

SOFTWARE AVAILABILITY

Two software packages already developed by our group clearly have application here.

First is a tabulation and cross-tabulation program that enables us to tabulate the number of rationalized occurrences in any defined field, and to cross the occurrences in any defined field against those in any other defined field. Existence of this package reduces the problem of preparing monthly reports to a simple formatting problem.

Second is an on-line inquiry program which permits retrieval at a terminal of any desired Boolean combination of relational operators applied to defined rationalized fields. Use of this program on a data set consolidating sequential monthly inputs, will permit answering questions not anticipated in the monthly report format and pursuit of complainant and complaint source cases through the totality of historical experience.

The method of data collection and the availability of softwear thus establish these constraints on the format of our data records:

1. Our data bank will be transaction oriented.

2. Records will be fixed length although economy of storage is regainable by packing based on storing zero-fill counts.

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3. Data fields will be rationalized.

4. Relational linkage will be principally on complaint source with linkage on complainant required to obviate multiple counting of complaints and facilitate pursuit of individual case histories.

DATA-COLLECTION REQUIREMENTS

The Uniform Consumer Complaint Record consists of six sections: record identification, complainant, complaint-source, complaint, referral, and transaction. It draws upon some of the techniques used by credit reporting agencies and turns them to the advantage of the consumer.

The Record Identification Section contains four fields: complaint channel (rationalized - 5 levels), date, type of transaction (rationalized - 4 levels: complaint, action, response, and summation), and file reference (complaint-source name and complaint date). In all, 29 characters.

The Complaint-Source Section contains 18 fields, ten of these are expected to be found in all complaints. These include: company name, municipality, phone number, major product category (rationalized to 26 levels using a mnemonic code similar to that used by the Associated Credit Bureaus), and minor product category (rationalized to up to 17 levels within major category; this rationalization is based upon:
1. frequency of complaints as determined by our sampling of historical complaint files, and
2. existence of specific complaint channels in the public sector).

The remaining essential entries in this section are: type of business (rationalized to 10 levels), method of doing business (rationalized to 16 levels), method by which the complainant was first contacted by the complaint source (rationalized to 12 levels), whether or not a written contract is involved, and whether or not the complainant has previously contacted the complaint source on his own initiative. In all, 48 characters.

The optional part of the Complaint-Source Section was provided to fulfill the data-recording needs of the Chamber of Commerce Business and Consumer Relations branch. It contains eight fields: street address of complaint-source, name of personal contact at the complaint-source, other branch of the complaint-source involved, ownership of company, date firm was established, date complaint file was started, other complaints received this year, and inquiries received this year in respect of this firm's reliability. In all, 88 characters. [139 characters for the complaint-source section].

The Complaint Section contains only two fields: major complaint (rationalized to 10 levels), and the actions by the complaint source that gave rise to this complaint (rationalized in up to 12 levels based upon analysis of the historical experience of cooperating complaint channels). In all, 4 characters.

The Referral Section likewise contains only two fields: the general classification of the complaint channel to which the complaint was referred (rationalized to 6 levels), and the specific complaint channel (rationalized to 43 levels to accommodate complaint channels in the public sector). In all, 3 characters.

The Transaction Section consists of two fields: the action taken by the complaint-channel to which the complaint was referred (rationalized to 14 levels), and final outcome (rationalized to 6 levels). In all, 3 characters.

When a complaint is first received, the Identification, Complainant, Complaint-Source, and Complaint Sections are filled out; 138 characters in most cases, 226 characters for cases filed in the Chamber of Commerce. Sometimes, the initial entry will also include the Referral Section when referral is made by the complaint channel as soon as the complaint is received.

A referral filed separately will include only the Identification Section and the Referral Section (32 characters). Likewise, a response filed separately will consist of the Identification Section, Referral Section, and Transaction Section (35 characters). Closing a specific case file results in creation of a record containing an Identification Section and a Transaction Section (32 characters).

DATA-PROCESSING REQUIREMENTS

The additional program requirements involve discovery of duplicate entries and production of ledger pages to deal with each complaint-source.

These requirements, together with the structure of the data file, dictate use of the COBOL language as a programming medium.

Programming is relatively simple. Sort on the following fields: complaint-source, complainant, date, and complaint channel.

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Then prepare a disk file for cross tabulation, on-line inquiry, and printing of ledger pages after eliminating duplicate entries by use of appropriate logical decision rules.

CONCLUSION

The "Discredit" Bureau appears to be a potent weapon for consumer advocacy. Perhaps some will feel it is too potent.

- There may be businessmen who feel this procedure will tend to libel them in their trade.
- There may be unscrupulous consumers who will abuse an effective complaint procedure by using it to blackmail businessmen into granting undeserved redress or benefits.
- Individuals or groups could conspire to flood the system with false or frivolous complaints designed to bias statistics for or against some agency in the public or private sector.

Anybody who thinks that some easy cybernetic "fix" exists for these potential hazards, is probably deceiving himself. Continuing human viligence over the system is a *sine qua non*.

The concept of a high-technology voluntary information utility dedicated to community service entails breaking new ground. The biggest problems are the *a priori* absence of:

1. A meaningful measure of cost-effectiveness.
2. A precise definition of the user population.
3. A knowledge of user needs for information.
4. Control over information resources.

For these reasons we regard our operations in computer-based community information networks as an on-going experiment *in vivo* with the city as an external adjunct to our Information Retrieval Laboratory.

The ultimate synthesis sought is nothing less than a self-organizing information system that can supply the basis for incremental pursuit of perceived social goals while maintaining the overall system in stable equilibrium.

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